INCLUDES INVENTORIED EROSION SITE COMMENTS FROM 2006

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2006 Recon Comments	2007 Recon Comments	2007 Photo #
Bear	0.8	Left	1	237	Whole Bank	Rotational failures	None	In or near	15 - 30	NEW SITE - Not critical yet, but Multiple rotational failures (recent) in berm. Getting into levee toe and lower slope. Tension cracks extensive at top of bank. Cohesive toe creates bench on which failures occur.	Still steep bank with some berm with pistol-butted rees. No other observed changes.	D6P8 u/s, D6P9 d/s, D6P10 d/s @ u/s end, D6P11
Cache Creek	LM 2.4	Left	10	754	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	***REMAINS CRITICAL*** DWR Emergency Repair Site Currently constructing setback levee nearby. New failures present and extensive. Downstream end of setback levee doesn't extend far enough downstream.	***REMAINS CRITICAL*** DWR repaired with setback levee, BUT levee doesn't extend far enough downstream.	D7P8, 9, 10, 11
Cache Creek	LM 2.8	Left	11	209	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	Large new failure, still bad but no critical yet.	No observed changes.	D7P12
Cache Creek	LM 3.4	Left	12	331	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	Some significant new erosion, especially fresh upper bank slumping. Still have substantial berm.	No observed changes.	D7P13, 14
Cache Creek	LM 3.9	Left	14	430	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	10 - 25	***NEW CRITICAL*** Some significant new erosion, especially fresh upper bank slumping. Also have small piping failure due to recent overbank flows.	***REMAINS CRITICAL*** Some new minor upper bank slumps. No other observed changes. (DWR plans setback levee at this location)	D7P15, 16
Cache Creek	LM 4.2	Left	15	325	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	3 - 25	***NEW CRITICAL*** Some significant new erosion, especially fresh upper bank slumping. Also have small piping failure due to recent overbank flows.	***REMAINS CRITICAL*** No observed changes. (DWR plans setback levee at this location)	D7P17
Cache Slough	15.9	Left	18	182	Toe	Wave wash	New stone failing in places	In	3 - 6	Revised - Partially Repaired but 100' at middle of reach has exposed filter fabric and stone riprap is gone.	No observed changes.	D4P9
Cache Slough	21.8	Right	19	839	Whole Bank and toe	Rotational failure, fluvial toe erosion	None	In	0	***REMAINS CRITICAL*** Still critical but identified as DWR Emergency Repair Site	***REMAINS CRITICAL***-Still critical but identified as DWR Emergency Repair Site. Has not been repaired yet. (NOTE: Site just upstream has been repaired but was not in inventory)	D4P5 @ u/s end, D4P6 of u/s repaired site
Cache Slough	22.8	Right	426	219	Toe and midslope	Geotechnical failures and wave wash	None	In	0		NEW SITE - Geotechnical failure of midslope and wave wash/scalloing in toe area. (Organic) Banks are ML/CL. Stone revetment upstream and downstream of site. Similar sites are present all along right bank downstream of this site. Most could just be maintenance sites.	D4P8
Cache Slough	23.6	Right	20	803	Scallops and toe	Wave wash and geotechnical failures	None	In	0	Stone riprap repair at middle of site, no other observed changes (set new waypoints at ends).	No observed changes.	D4P7
Cherokee Canal (DWR - MA 13)	LM14.0	UNIT 2 (East/L eft)	400	185	Toe/Lower Slope	Slumping at toe and piping	None	Into levee toe	0	NEW SITE - Fire break maintenance at toe of levee has cut into the toe area of levee resulting in oversteepening of the lower slope which allows the lower slope area to slide/slump.	DID NOT OBSERVE.	
Cherokee Canal (DWR - MA 13)	LM21.9	UNIT 2 (East/L eft)	401	1875	Toe/Lower Slope	Fluvial	None	Into levee toe	0	NEW SITE - Flow along the levee toe has eroded out the lower slope. Levee slope material is silt and clay.	DID NOT OBSERVE.	
Deep Water Ship Channel (RD 999)	LM5.00	UNIT 1 (East/L eft)	420	25	Lower levee slope	Saturation slumping	None	Into levee slope	0	NEW SITE - Slump failure of lower slope. Longitudinal cracks present along levee slope	DID NOT OBSERVE.	
Deep Water Ship Channel (RD 999)	LM5.01	UNIT 1 (East/L eft)	421	15	Lower levee slope	Saturation slumping	None	Into levee slope	0	NEW SITE - Slump failure of lower slope. Longitudinal cracks present along levee slope	DID NOT OBSERVE.	
Deer Creek (Tehama County District)	LM0.9	UNIT 2 (North/ Right)	402	260	Whole bank	Fluvial	None	Near	10-15	NEW SITE - Banks are composed of lithified cobbly alluvial soils (relict alluvial fan deposits). Slow erosion of lithified lower bank materials with faster erosion of overlying less cohesive soils resulting in channel "skating" across lithified horizon i	DID NOT OBSERVE.	

Table 1. Sacramento River Levee System - Current Erosion Sites - 2007

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2006 Recon Comments	2007 Recon Comments	2007 Photo #
Deer Creek (Tehama County District)	LM2.4	UNIT 1 (South/ Left)	403	100	Whole bank	Fluvial	None	Near	10-15	NEW SITE - Erosion along outher bank of meander bend getting close to projection of levee toe. Trees are leaning out into channel and ready to fall. Whole bank in reach is actively eroding.	DID NOT OBSERVE.	
Elder Creek (Tehama County District)	LM1.4	UNIT 1 (North/ Left)	404	330	Whole bank	Fluvial & mass failures	None	Near	25-30	NEW SITE - High vertical bank in places due to mass failures. Alternate bars in straight reach causing thalweg meandering and erosion of bank. Banks are cohesive with non-cohesive gravel horizons. DWR is monitoring this site.	DID NOT OBSERVE.	
Elder Creek (Tehama County District)	LM3.0	UNIT 2 (South/ Right)	405	130	Whole bank	Mass failures & undercut toe	None	Near	25-30	NEW SITE - Mass failure of this bank due to being along outside of bend where erosion and undercutting are greatest. Low flow is being forced into toe of this bank by point bar on opposite side of creek.	DID NOT OBSERVE.	
Elder Creek (Tehama County District)	LM4.1	UNIT 1 (North/ Left)	406	300	Upper levee slope	Overtopping & fluvial	Rock at toe	Into upper levee slope	10	NEW SITE - Overtopping flows caused erosion of the upper levee slope. Hay bales were recently placed along the top to control overtopping flow and erosion.	DID NOT OBSERVE.	
Elk Slough	0.2	Both	21	Whole Reach	Levee slope	Mass failure	None	In	0	No Observed changes. Both banks are still oversteepend in most places and potetnially susceptible to geotechnical failures.	No observed changes.	D3P66 LB
Feather	0.6	Left	22	163	Toe	Scour	Cobble	In	15	No Observed changes.	No observed changes.	D5P2, 3
Feather	1.0	Left	23	1052	Toe	Scour	None	Near	15	No Observed changes.	Some minor new slumping at waterline. No other observed changes.	D5/P4, 5
Feather	3.6	Left	25	675	Whole Bank	Rotational failure, fluvial toe erosion	None	Near	30	NEW SITE - Sandy, silty bank with intermittent pockets of erosion. Rotational failure and tree popouts most of problem. Some upper slope fluvial erosion.	No observed changes.	D5P6, 7
Feather	3.8	Left	26	626	Whole Bank	Rotational failure, fluvial toe erosion	None	Near	25 - 30	NEW SITE - Sandy, silty bank with intermittent pockets of erosion. Rotational failure and tree popouts most of problem. Some upper slope fluvial erosion.	No observed changes.	D5P8, 9
Feather	5.0	Left	27	909	Berm	Fluvial	None	>10m	>30	No Observed changes.	No observed changes.	D5P10, 11
Feather	5.5	Left	28	328	Whole Bank	Rotational failure, fluvial toe erosion	None	In	25 - 30	NEW SITE - Sandy, silty bank with intermittent pockets of erosion. Rotational failure and tree popouts most of problem. Some upper slope fluvial erosion. Two large sites mainly around failing trees.	No observed changes.	D5P12, 13
Feather	7.0	Left	29	413	Toe, Levee slope	Fluvial	Cobble	In	<30	No Observed changes.	No observed changes.	D5P14, 15
Feather	17.8	Left	30	407	Whole Bank	Fluvial, Slope failures	None	Near	50	Not Critical, but still actively eroding. Large old rotational failures in high bank downstream and new erosion at site.	No observed changes.	D5P16, 17
Feather	19.7	Left	31	307	Whole Bank	Fluvial, Slope failures	None	Near	50	Not Critical, but still actively eroding. Large old rotational failures in high bank downstream and new erosion at site.	No observed changes.	D5P18, 19
Feather	28.5	Right	407	1260	Toe/lower slope	Fluvial (slow)	None	Into Toe	0-10	Expanded Recon Site - Slow toe erosion (big trees along toe of slope indicate stability). Levee slope has been modified with river cobbles resulting in a steeper slope but thicker levee cross section. City courthouse building on landward side. This is a borderline site.	No observed changes.	D5P20, 21
Georgiana Slough	0.3	Left	33	1225	Toe, Levee slope	Pocket erosion	None	In	<30	Some new rock riprap at downstream end (~100 ft long). Several small pockets of new rock riprap in scallops. Brush boxes in poor to fair condition.	No observed changes.	D4P15 @ d/s end
Georgiana Slough	1.7	Left	36	1365	Toe	Pocket erosion	Rock riprap	In	<30	No observed changes.	No observed changes.	D4P16
Georgiana Slough	2.5	Left	38	353	Toe	Erosion pockets	None	In	<30	No observed changes.	No observed changes.	D4P17
Georgiana Slough	3.6	Left	39	1165	Levee slope	Erosion pockets	None	In	<30	No observed changes.	No observed changes.	D4P18, 19
Georgiana Slough	3.7	Left	40	246	Toe	Erosion pockets	None	In	<30	No observed changes.	No observed changes.	D4P20
Georgiana Slough	3.7	Left	41	30	Toe	Local pocket	None	In	<30	No observed changes.	No observed changes.	D4P21

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Georgiana Slough	4.0	Left	42	480	Levee	Fluvial	Rock riprap	In	<30	No observed changes.	No observed changes.	D4P22
Georgiana Slough	4.3	Left	43	948	Toe	Erosion pockets	Rock riprap	In	<30	No observed changes.	No observed changes.	D4P23
Georgiana Slough	4.5	Left	1514 (A)	150	Toe	Wave wash and Pocket erosion	None	In	<30	No observed changes.	No observed changes.	D4P24
Georgiana Slough	4.6	Left	1514 (B)	1138	Toe	Wave wash and Pocket erosion	None	In	<30	No observed changes.	No observed changes.	D4P25, 26
Georgiana Slough	5.3	Left	46	3071	Levee slope	Erosion pockets	None	In	<30	No observed changes.	No observed changes.	D4P27-29
Georgiana Slough	6.1	Left	47	1707	Levee toe, Berm slope	Deep pockets	Some rock riprap	In (in spots)	10	No observed changes.	No observed changes.	D4P30, 31
Georgiana Slough	6.4	Left	48	405	Repaired	Repaired	None	In	10	No observed changes.	No observed changes.	D4P32
Georgiana Slough	6.6	Left	49	348	Levee	Deep pockets	None	In	<30	No observed changes.	No observed changes.	D4P33
Georgiana Slough	6.8	Left	50	1093	Levee slope	Deep pockets	None	In	15	No observed changes.	No observed changes.	D4P34, 35
Georgiana Slough	7.0	Right	51	673	Toe	Scour	Rock riprap	In	<30	New rock on upper slope behind brush boxes at upstream end. Stone riprap is sliding off hard toe.	No observed changes.	D4P36
Georgiana Slough	8.3	Left	55	81	Levee slope	Fluvial	None	In	15	No observed changes.	No observed changes.	D4P37
Georgiana Slough	9.3	Left	59	1019	Levee	Fluvial	Rock riprap	In	<30	Some rock riprap repair of pockets behind brush boxes at upstream end, but is still borderline.	No observed changes.	D4P38, 39
Knights Landing Ridge Cut	LM0.2	UNIT 1 (West/ Right)	411	1400	Toe/Lower Slope	Wave wash & saturation slumping	Old river cobbles (intermittent)	Into toe & lower slope	0	NEW SITE - Significant wave wash erosion and saturation slumping of the lower levee slope and toe. Tension and separation cracks evident in middle and upper levee slope indicate potential for mass slumping of levee slope.	DID NOT OBSERVE.	
Knights Landing Ridge Cut	LM5.3	UNIT 2 (East/L eft)	412	8500	Toe/Lower Slope	Fluvial, general, & sloughing due to rapid HW drawdown	None	Into levee slope	0-5	NEW SITE - Channel bank forms levee toe. Levee toe/bank has slowly been retreating. In places, have 6-8 foot scarp at levee toe due to slow retreat of bank.	DID NOT OBSERVE.	
Knights Landing Ridge Cut	LM4.2	UNIT 2 (East/L eft)	408	350	Toe/Lower Slope	Fluvial, general, & sloughing/ slumping	None	Into levee slope	0	NEW SITE - The whole levee toe area is slowly slumping into channel (creep) due to dewatering & poor slope soils. Pistol-butted trees at levee toe indicate slow retreat.	DID NOT OBSERVE.	
Knights Landing Ridge Cut	LM3.1	UNIT 2 (East/L eft)	409	350	Toe/Lower Slope	Fluvial, general, & sloughing/ slumping	None	Into levee slope	0	NEW SITE - The whole levee toe area is slowly slumping into channel (creep) due to dewatering & poor slope soils. Occaisional piping in levee slope evident as well. Pistol-butted trees at levee toe indicate slow retreat.	DID NOT OBSERVE.	
Knights Landing Ridge Cut	LM3.0	UNIT 2 (East/L eft)	410	1000	Toe/Lower Slope	Fluvial, general, & sloughing/ slumping	None	Into levee slope	0	NEW SITE - The whole levee toe area is slowly slumping into channel (creep) due to dewatering & poor slope soils. Occaisional piping in levee slope evident as well. Pistolbutted trees at levee toe indicate slow retreat.	DID NOT OBSERVE.	
Lower American	0.4	Left	66	340	Toe and levee slope	Fluvial and people	None	In	6 - 30	NEW SITE - Upstream end is worst. Erosion into toe. Worst at downstream end of upstream rock riprap. Could be maintenance site.	No observed changes.	D8P1, 2
Lower American	2.8	Left	68	280	Toe and levee slope	Mass failure, Toe erosion, tree popouts	Cobbles	In	10 - 20	NEW SITE - Downtream end has lower slope erosion. Upstream end has large scallop due to rotational failure or tree popout.	New tree failure on slope a downstream end. No other observed changes.	D8P4-7
Lower American	10.0	Left	77	500	Slope, Toe	Slope and toe erosion, then slope failure	Brush Boxes	Near	10 - 30	WATCH SITE - Brush boxes have been burned. Site should be monitored though.	Vegetation is not colonizing or taking root. Continue to monitor.	D8P10, 11
Lower American	10.6	Left	79	136	Whole Bank	Mass Failure/tree popouts	None	In toe	15 - 20	NEW SITE - Steep, near vertical slope with fallen tree (recent). Bank is very high so failure is into slope of levee, but have cohesive outcrop in toe = potential for "skating."	No observed changes.	D8P12, 13
Natomas Cross Canal (RD 1001)	LM3.0	UNIT 5 (North/ Right)	413	190	Upper levee slope	Saturation slumping	None	Into top of levee	40	NEW SITE - Noted old saturation slumping of upper levee slope that is into levee core (up near high water line)	DID NOT OBSERVE.	

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River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2006 Recon Comments	2007 Recon Comments	2007 Photo #
Sacramento	8.0	Left	80	757	Levee slope	Waves, Drawdown	Riprap - low	In	0	No observed changes	No observed changes.	D4P14
Sacramento	10.8	Left	81	1050	Mid-bank	Wave Wash	Rock Riprap at Toe	In	0	No observed changes (low vertical bank along roadway)	PL84-99 SITE - Mostly repaired except upstream 150-200 feet and downstream 250 feet. Will be kept in inventory.	D4P12, D4P13 d/s
Sacramento	21.5	Left	88	159	Partially Repaired	Partially Repaired	Rock riprap	In	5 - 10	No observed changes	No observed changes.	D3P81
Sacramento	22.5	Left	89	852	Berm	Fluvial, Mass failure, Wave wash	None	Near	10	Currently installing new brush in downstream brush boxes, no other observed changes	Rock toe in middle portion for approx. 150 feet. Brush boxes in places. No other observed changes.	D3P79, 80
Sacramento	22.7	Left	90	311	Berm	Fluvial, Mass failure, Wave wash	None	Near	0	No observed changes	Brush boxes in places. No other observed changes.	D3P77, 78
Sacramento	23.2	Left	91	589	Berm	Fluvial, Mass failure, Wave wash	None	Near	10	No observed changes	Brush boxes in places. No other observed changes.	D3P75, 76
Sacramento	23.3	Left	92	256	Berm	Mass failure, Fluvial, Wave wash	None	Near	30 - 50	No observed changes	Brush boxes in places. No other observed changes.	D3P74
Sacramento	24.8	Left	93	781	Berm slope	Mass failure, Fluvial, Wave wash	None	In	10	No observed changes	No observed changes.	D3P73
Sacramento	25.2	Left	94	304	Berm slope	Mass failure, Fluvial, Wave wash	Rock riprap	Near	10	No observed changes	No observed changes.	D3P72
Sacramento	26.0	Left	95	1547	Partially Repaired	Partially Repaired	None	In at D/S end	0 - 50	Some small spots fixed with stone, no other observed changes	Brush boxes at upstream end to downstream end. Some brush missing from boxes.	D3P71 @ u/s end
Sacramento	31.6	Right	101	442	Levee slope	Fluvial	Riprap	In	0	No observed changes (moved downstream waypoint)	No observed changes.	D3P67
Sacramento	35.3	Right	106	183	Full Bank	Scour around trees, toe, fluvial	Rock riprap	In	0	NEW SITE - Scour around trees, trees cut down, but stumps left in, midlsope erosing, toe rock riprap missing.	No observed changes.	D3P40
Sacramento	35.4	Right	107	330	Pocket, Toe	Wave wash, Tree popouts	Riprap	In	0	No observed changes	No observed changes.	D3P41
Sacramento	35.4	Left	108	499	Toe, Lower bank slope	Eddy and wave wash	Rock Riprap (?)	In	0 - 10	No observed changes	No observed changes.	D3P42
Sacramento	38.5	Right	109	360	Partially Repaired	Partially Repaired	Riprap	In	0	No observed changes	No observed changes.	D3P39
Sacramento	41.9	Right	110	1360	Structural problem	Mass Failures	Cobble (short section)	In	0 - 10	Some minor new erosion. Brush boxes not working well; most of brush has floated out of boxes. No other observed changes.	Brush boxes have recetnly been refilled with brush. No other observed changes.	D3P37, 38
Sacramento	42.7	Right	111 (Set New U/S WPT)	127	Full Bank	Fluvial & mass failure	None	ln	0	NEW SITE - Into levee slope and toe. New rock riprap in spots but not at toe.	Site has been mostly repaired BUT downstream 100 feet near pump station needs to be fixed.	D3P35, D3P36 @ pump sta.
Sacramento	49.7	Left	1510 (Set New D/S WPT)	245	Toe, Berm	Fluvial	None	Near	10	***REMAINS CRITICAL*** DWR Emergency Repair Site Combined Sites at RM49.6 and RM49.7 Some repair in worst pockets, but not continuous and some repairs are coming unravelled.	PARTIALLY REPAIRED Didn't extend repairs far enough upstream. Missed last 200 feet upstream Still needs to be repaired.	D3P26
Sacramento	52.3	Left	122	1000	Toe, pocket	Fluvial or tree popout	None	In	5 - 10	No observed changes.	Extended Site - No observed changes	D3P21
Sacramento	53.5	Right	126	402	Whole Bank	Fluvial	Concrete Rubble Toe, Old Cobbles above	In	5	Some minor new erosion, but also some deposition of sand on bank.	WEST SAC SITE "I" - No observed changes.	D3P18
Sacramento	55.2	Left	128	664	Toe	Fluvial	Old Cobbles	ln	0 - 15	No observed changes (Revised length and added waypoints).	No observed changes.	3P17
Sacramento	55.5	Left	129	312	Levee slope	Mass failure	Rock riprap	ln	15	No observed changes.	No observed changes.	D3P16
Sacramento	56.5	Right	131	372	Berm	Fluvial	None	Very close	25	No observed changes.	WEST SAC SITE "F" - No observed changes.	D3P13

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Sacramento	56.6	Left	132	35	Toe, Levee slope	Fluvial, Mass failure	Concrete rubble	Levee is set back	125	Minor new erosion at top of bank.	No observed changes. (60-70 foot wide levee section here)	D3P12
Sacramento	56.7	Right	427	662	Toe only	Fluvial and people	None	Near	30-40		NEW SITE = WEST SAC SITE "D" - Have good berm width with minor toe erosion. Close to levee toe projection, but levee slpoe is steep. Site will be evaluated in ratings.	D3P11
Sacramento	57.0	Right	135	172	Toe	Fluvial	None	In	0 - 10	No observed changes.	WEST SAC SITE "B" - No observed changes	D3P7
Sacramento	57.2	Right	428	457	Toe and lower bank	Fluvial	Cobbles	In	0-10		NEW SITE = WEST SAC SITE "A" - Steep levee slope with cobble revetment rolling off bank and ML/CL toe. Site will be evaluated in ratings.	D3P6 @ middle
Sacramento	62.9	Right	138	178	Toe	Fluvial	Concrete rubble and cobble	In	?	No observed changes.	No observed changes.	D3P4
Sacramento	63.0	Right	139	100	Toe	Fluvial	Rock and rubble	In	?	No observed changes.	No observed changes.	D3P3
Sacramento	71.3	Right	84	522	Berm	Scallops	Cobble	Near	25	Some minor erosion in old pockets. No other observed changes.	No observed changes.	D2P73
Sacramento	73.5	Left	144	1065	Full Bank	Fluvial, Mass failure	None	Near	30 - 50	Some minor new erosion.	No observed changes.	D2P64, 65
Sacramento	74.4	Right	146	1336	Toe of berm	Toe retreat	None	Near	25 - 50	Minor slope cleaning, no other observed changes.	No observed changes.	D2P61-63
Sacramento	75.3	Right	147	2749	Levee toe, Berm slope	Mass failure, Toe erosion	None	Near	30 - 50	Minor new erosion, but slow. No other observed changes.	No observed changes.	D2P58 @, D2P59 u/s, D2P60 @ d/s end
Sacramento	77.2	Left	148	677	Toe	Fluvial	Concrete rubble	In	30	Minor new erosion. No other observed changes.	No observed changes.	D2P57
Sacramento	77.7	Right	149	156	Full Bank	Eddy scour off DS end of rock riprap	None	Near or in	25 - 30	NEW SITE - Eddy sour off end of rock riprap causing erosion and scour hole near levee; sandy silty bank with riprap at US end.	No observed changes.	D2P56 u/s
Sacramento	78.3	Left	151	654	Toe of berm	Fluvial	None	Near	15	No observed changes.	No observed changes.	D2P54
Sacramento	78.8	Left	152	468	Toe, Berm slope	Fluvial, slow retreat of levee/berm ? slope	None	In or very close	35	No observed changes.	No observed changes.	D2P53
Sacramento	83.9	Right	153	474	Full Bank	Rotational failures, tree popouts	None	Near	40 - 50	NEW SITE - Approx. 18-20' bank near levee at corner of levee at Freemont Weir. Vertical bank with undercutting/mass failure. About 50' back to levee.	No observed changes. Staked at top of bank for monitoring.	D2P52 d/s
Sacramento	86.3	Left	155	2824	Toe	Toe scour	Cobble	Near	30 - 50	New erosion upstream so moved upstream waypoint. New bank failures near levee but still have wide berm in most places.	No observed changes.	D2P49 @ u/s end, D2P50 @ d/s end
Sacramento	86.5	Right	156	110	Full Bank	Rotational failures/tree popouts	None	In or very close	8 - 10	NEW SITE - Large rotational failure next to pump station. Gettting near/into toe of levee. Downstream have dense vegetation on vertical bank, rock riprap at upstream end.	Repaired by local - will keep in inventory and continue to monitor since stone bank protection is mixed with fill dirt.	D2P48
Sacramento	86.9	Right	157	576	Full Bank	Rotational/ mass failures	None	In or very close	25 - 30	NEW SITE - Short section is into levee toe, rest is near levee toe. Mass failure and fluvial erosion of depositional material. Rock riprap at upstream and downstream ends.	No observed changes.	D2P47
Sacramento	87.0	Left	158	1534	Full Bank	Rotational/ cantilever/ slab failures, undercut toe	None	Near	40 - 50	NEW SITE - Long section that has been rapidly eroding and is now getting close to levee. Downstream end may have cobbles under depositional berm, upstream doesn't. Upstream is unprotected silt and sand with large failures and undercut toe.	Some new minor scallops and failures. No other observed changes.	D2P45 d/s, D2P46 @ d/s end
Sacramento	92.8	Left	159	1106	Toe	Toe scour	Cobble	In	0 - 15	No observed changes.	No observed changes.	D2P43, D2P44 @ d/s end

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Sacramento	93.7	Left	160	765	Toe, Levee slope	Fluvial, Mass failure	None	Near	15	No observed changes.	No observed changes.	D2P41 @ u/s end, D2P42 @ d/s end
Sacramento	95.8	Left	161	904	Berm		Concrete rubble, rock, bricks, and steel at DS half of site	Near	30 - 40		No observed changes.	D2P40 @ d/s end
Sacramento	96.2	Left	1513	1268	Berm		Concrete rubble, rock, bricks, and steel at DS half of site	Near	30 - 40		No observed changes.	D2P39 @u/s end
Sacramento	99.0	Left	162	1620	Berm or Levee slope	Toe scour	Riprap - handplaced	In or near	10	No observed changes.	No observed changes.	D2P38
Sacramento	101.3	Right	165	188	Toe	Toe Scour	Cobble	In	10 - 30	No observed changes.	No observed changes.	D2P33
Sacramento	103.4	Left	166	85	Full Bank	Overtopping scour and eddy	Cobble	In	25	NEW SITE - Eddy flow and overtopping flow collide on inside of tight bend. Scour caused by converging flows created scallop in bank on inside of bend downstream of bend apex.	No observed changes. Still looks bad. Potential candidate for setback levee.	D2P32
Sacramento	104.0	Left	167	3012	Levee toe, Berm slope	Pocket erosion	Cobble	In or near	35	Two new small slumps. No other changes.	No observed changes.	D2P31 @ d/s end
Sacramento	104.5	Left	168	1158	Levee toe, Berm slope	Fluvial	Cobble	In or near	40	No observed changes.	No observed changes.	D2P29 @ u/s end, D2P30 @ d/s end
Sacramento	114.5	Right	169	188	Full Bank	Rotational failures/ tree popout	None	In or near	30	NEW SITE - Failed tree and scour of bank. Levee is nearby. Erosion also off downstream end of upstream reock riprap.	No observed changes.	D2P28
Sacramento	116.0	Left	170	830	Toe and Berm	Fluvial	None	Near	30	Some new erosion, cleaned off older scars and slump faces.	No observed changes.	D2P27 d/s
Sacramento	116.5	Left	171	2364	Berm	Localized mass failures	None	In or Near	10	No observed changes.	Some new slumps. No other observed changes.	D2P25 u/s end, D2P26 d/s end
Sacramento	122.0	Right	172	263	Lower bank	Mass failure	None	Near	40	No observed changes.	No observed changes.	D2P23, 24
Sacramento	122.3	Right	173	238	Whole Bank	Toe scour	None	Near	40	No observed changes.	No observed changes.	D2P22
Sacramento	123.3	Left	174	108	Full Bank	Toe scour	None	In or near	30	NEW SITE - Into levee toe. Rock riprap at upstream end has poor transition causing eddy sour at end.	No observed changes.	D2P21
Sacramento	123.7	Right	176	130	Toe	Toe scour	Concrete rubble	Near	15	No observed changes.	No observed changes.	D2P19
Sacramento	127.9	Right	178	236	Whole bank	Scour	None	Near	35	No observed changes.	No observed changes.	D2P18
Sacramento	130.0	Left	179	337	Levee Toe, Berm Slope	Fluvial	Cobble	In or near	0 - 60	No longer critical. Some repair. No other observed changes.	No observed changes.	D2P17
Sacramento	131.8	Left	181	140	Toe	Eddy erosion	None	In or near	25	No observed changes.	No observed changes.	D2P15
Sacramento	132.9	Right	182	578	Full Bank	Fluvial	Cobbles	Near	30	NEW SITE - Erosion of depositional material over cobbles. COE wants to watch.	No observed changes. Erosion of depositional material over cobbles. COE wants to monitor.	D2P14 d/s
Sacramento	133.0	Left	183	1069	Toe	Toe scour	Cobble and concrete rubble	Near	30	No observed changes.	No observed changes.	D2P13 @ worst
Sacramento	133.8	Left	184	199	Toe	Toe scour	Cobble	In	0	No observed changes.	No observed changes.	D2P12
Sacramento	136.6	Left	186	615	Toe	Toe scour	Cobble	In	0	No observed changes.	No observed changes.	D2P9
Sacramento	136.7	Right	187	246	Pocket, Toe	Mass failure, Fluvial		Near	30	New erosion of scallops with two new scallops.	No observed changes.	D2P8

Table 1. Sacramento River Levee System - Current Erosion Sites - 2007

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2006 Recon Comments	2007 Recon Comments	2007 Photo #
Sacramento	136.9	Right	188	289	Whole bank	Fluvial, Mass failure	Cobble upstream	Near	30	No observed changes.	Upstream end looks a little worse, but still have cohesive toe. No other observed changes.	D2P6 d/s, D2P7 u/s
Sacramento	138.1	Left	189	1242	Toe	Toe scour	Cobble	In	0	No observed changes.	No observed changes.	D2P5
Sacramento	152.8	Left	192	248	Full Bank	Rotational failures/tree popouts	None	Near	30	NEW SITE - Large rotational/mass failure in bank with tree slump. Tough toe material (CL/ML).	No observed changes. Site is between stone revetments with pump station at downstream end.	D1P22, 23
Sacramento	157.7	Right	194	488	Full Bank	Fluvial, Mass Failure	None	Near	50	No observed changes.	No observed changes.	D1P19 u/s
Sacramento	163.0	Left	195	1194	Whole bank	Fluvial			60	Some minor new erosion at the downstream end.	No observed changes.	D1P18 d/s
Sacramento	168.3	Left	311	552	Berm slope	Toe scour	None	Near	30	New sand on bank and bar. No other observed changes.	No observed changes. New sand deposition with vegetation colonizing bars between dikes.	D1P14, 15
Sacramento	172.0	Left	430	970	Whole bank	Toe scour and slumping	None	Near	30+/-		NEW SITE - 20 year DWR Monitoring Site. Getting close to levee. Bank is clayey silt with clayey/silty toe.	D1P10 @ bank, D1P11 u/s
Sacramento	177.8	Right	312	1005	Toe	Toe scour	Cobble	In	0	No observed changes.	No observed changes.	D1P7 d/s, D1P8 @ middle, D1P9
Steamboat	16.6	Right	316	396	Levee slope	Fluvial, wavewash	Riprap	In	0	***UPGRADED TO CRITICAL*** DWR Emergency Repair Site (RM16.5) No observed changes, but into levee section.	***REMAINS CRITICAL*** Remains unrepaired - No other observed changes.	D3P85
Steamboat	18.8	Right	317	361	Levee slope, toe	erosion above riprap	Riprap	In	0	No observed changes.	No observed changes.	D4P2
Steamboat	23.2	Left	321	178	Whole Bank	Partially Repaired	Intermittent Concrete Rubble	In	0	New rock riprap along toe downstream of dock. No other observed changes.	No observed changes.	D3P58
Steamboat	23.9	Right	322	168	Partially Repaired	Partially Repaired	None	In	<30	No observed changes.	No observed changes.	D3P57
Steamboat	24.7	Right	327	886	Partially Repaired	Partially Repaired	Riprap	In	<30	Some rock/small material dumped down bank but is slowly unravelling. Upstream end is unravelling faster. Steep slope with poor gradation so fines washing out.	No observed changes.	D3P55, 56
Steamboat	25.0	Left	325	250	Partially Repaired	Partially Repaired	None	In	<30	50 ft pocket at downstream end and at upstream end with new rock riprap in between.	Upstream end has been repaired - Set new waypoint for new upstream end of erosion site. No other observed changes.	D3P53
Steamboat	25.8	Right	429	240	Toe & Midslope	Wave wash, Fluvial	None	In	0		NEW SITE - Slow erosion, probably due to wave wash and fluvial erosion. Probably old site, but not seen becase boats parked her in past.	D3P51,52
Steamboat	26.0	Left	326	317	Berm slope, Toe	Mass failure, Wave wash		In	5	No observed changes. Note: driveway is at top of bank at downstream 1/2 of site.	No observed changes.	D3P50
Sutter	24.7	Right	323	1723	Partially Repaired	Partially Repaired	Riprap, dumped from topbank	In	<30	No observed changes.	No observed changes.	D3P62 u/s end, D3P60
Sutter	26.5	Left	330	555	Toe	Toe unravelling		In	0	Still have some new unravelling and exposed fabric. Moved upstream waypoint and changed size.	No observed changes.	D3P65 d/s end
Sutter Bypass East Levee (DWR)	LM0.4	EAST LEVEE (East/L eft)	414	100	Toe/Lower Slope	Slumps & rotational failures	None	Into levee toe	5-6	NEW SITE - Levee slope is 3:1 or 4:1. Channel along left bank levee is right up to levee. Bank is vertical or near vertical so erosion is into levee toe. (Note: vertical bank is present at levee toe along most of levee downstream, but have 8-10 feet wi	DID NOT OBSERVE.	
Willow Slough Bypass (RD 2035)	LM2.2	UNIT 3 (North/ Left)	417	2099	Mid levee slope	Wave wash	None	Into levee slope	0	NEW SITE - Significant wave wash erosion is present at mid slope and forming wave-cut bench. Levee surface materials are silt and clay.	DID NOT OBSERVE.	
Willow Slough Bypass (DWR)	LM0.6	UNIT 1 (North/ Left)	416	1497	Upper levee slope	Wave wash	None	Into levee slope	0	NEW SITE - Wave wash erosion of noncohesive upper levee slope is undermining road pavement. Coarse-grained levee core is exposed and material is sloughing out from under road.	DID NOT OBSERVE.	

Table 1. Sacramento River Levee System - Current Erosion Sites - 2007

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2006 Recon Comments	2007 Recon Comments 2007 Photo #
Willow Slough Bypass (DWR)	LM6.9	UNIT 2 (South/ Right)	415	700	Lower levee slope	Wave wash	None	Into levee slope	0	NEW SITE - Wave wash erosion of levee slope is creating a wave-cut bench and scarp.	DID NOT OBSERVE.
Yolo Bypass (RD 2035)	LM0.1	UNIT 2 (West/ Right)	424	425	Toe/Lower Slope	Wave wash & saturation slumping	None	Into toe & lower slope	0	<u>NEW SITE</u> - Wave wash erosion and some saturation slumping occurring. Tension/separation cracks evident in finegrained levee slope materials.	DID NOT OBSERVE.
Yolo Bypass (RD 2035)	LM2.0	UNIT 2 (West/ Right)	423	275	Toe/Lower Slope	Wave wash & saturation slumping	None	Into toe & lower slope	0	NEW SITE - Wave wash erosion and some saturation slumping occurring. Tension/separation cracks evident in fine-grained levee slope materials.	DID NOT OBSERVE.
Yolo Bypass (RD 2035)	LM3.8	UNIT 2 (West/ Right)	422	1600	Toe/Lower Slope	Wave wash & saturation slumping	None	Into toe & lower slope	0	NEW SITE - Wave wash erosion and some saturation slumping occurring. Several small scallops present in lower levee slope/toe due to saturation slumping. Tension/separation cracks evident in fine-grained levee slope materials.	DID NOT OBSERVE.
Yolo Bypass (West Levee - DWR)	LM2.6	UNIT 1 (West/ Right)	419	825	Toe/Lower Slope	Wave wash & fluvial	River cobbles	Into levee toe	0	NEW SITE - Slow wave wash and general fluvial erosion of toe area under river cobbles. Erosion is creating a scarp and cobble covered wave-cut bench	DID NOT OBSERVE.
Yolo Bypass (West Levee - DWR)	LM2.5	UNIT 1 (West/ Right)	418	182	Toe/Lower Slope	Wave wash & fluvial	None	Into levee toe	0	NEW SITE - Worst erosion is at upstream end of recently installed rock riprap. Filter fabric is exposed.	DID NOT OBSERVE.
Yuba	LM2.3	Left	425	1350	Toe/lower slope	Agricultureal Cultivation	None	Into Toe	NA	Farmers have removed levee toe and lower slope during plowing and cultivation activities resulting in high, near vertical face at levee toe and exposure of levee core.	Levee is set back from channel. No observed changes. D8P3

SITES NEWLY IDENTIFIED AND ADDED TO DATABASE IN 2007

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Cache Slough	22.8	Right	426	219	Toe and midslope	Geotechnical failures and wave wash	None	In	0	NEW SITE - Geotechnical failure of midslope and wave wash/scalloing in toe area. (Organic) Banks are ML/CL. Stone revetment upstream and downstream of site. Similar sites are present all along right bank downstream of this site. Most could just be maintenance sites.	D4P8
Sacramento	56.7	Right	427	662	Toe only	Fluvial and people	None	Near	30-40 +/-	NEW SITE = WEST SAC SITE "D" - Have good berm width with minor toe erosion. Close to levee toe projection, but levee slpoe is steep. Site will be evaluated in ratings.	D3P11
Sacramento	57.2	Right	428	300	Toe and lower bank	Fluvial	Cobbles	In	0-10	NEW SITE = WEST SAC SITE "A" - Steep levee slope with cobble revetment rolling off bank and ML/CL toe. Site will be evaluated in ratings.	D3P6 @ middle
Sacramento	172.0	Left	430	500	Whole bank	Toe scour and slumping	None	Near	30+/-	NEW SITE - 20 year DWR Monitoring Site. Getting close to levee. Bank is clayey silt with clayey/silty toe.	D1P10 @ bank, D1P11 u/s
Steamboat	25.8	Right	429	100	Toe & Midslope	Wave wash, Fluvial	None	In	0	NEW SITE - Slow erosion, probably due to wave wash and fluvial erosion. Probably old site, but not seen becase boats parked her in past.	D3P51,52

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Bear	1.2	Left	2	1133	Whole Bank	Rotational failures	None	In or near	10 - 15	Currently being repaired - Remove from inventory	D6P6, 7
Bear	2.4	Left	3	870	Berm	Toe Erosion, Upper Bank Slope	None	Near	50	Repaired - Remove from inventory	D6P2 u/s, D6P3 mid, D6P4 d/s, D6P5
Bear	9.8	Right	5	1106	Berm	Toe Erosion, Upper Bank Slope	None	Near	0	Repaired - Remove from inventory	D6P13, 14
Cache Creek	LM 0.8	Left	7	342	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	Repaired - Remove from inventory (repaired with setback levee)	D7P2 d/s, D7P3 levee, D7P4 u/s
Cache Creek	LM 1.1	Left	8	183	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	Repaired - Remove from inventory (DWR repaired with setback levee)	D7P5 d/s, D7P6,7 pan
Cache Slough	15.8	Left	17	250	Toe	Wave wash	New stone failing in places	ln	3 - 6	Repaired - Remove from inventory	D4P10
Feather	37.9	Right		2000			None	Near	>30	Not a site - Remove from inventory.	NA
Sacramento	16.9	Left	86	210	Full Bank	Tree popout & scour	Rock riprap/ concrete rubble	ln	0	Currently being repaired - Remove from inventory.	D3P83 u/s
Sacramento	20.8	Left	87	1052	Partially Repaired	Partially Repaired	None	ln		Repaired - Remove from inventory.	D3P82 u/s
Sacramento	26.5	Left	98	349	Toe, Levee slope	Toe scour	Riprap	In		Repaired - Remove from inventory.	D3P70
Sacramento	26.9	Left	99	436	Toe	Toe scour	Cobble	ln	0	Repaired - Remove from inventory.	D3P68, 69

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Sacramento	32.5	Right	102	1983	Toe, Levee slope	Fluvial, Mass failure	Intermittent rock riprap, concrete rubble	In	0	Repaired - Remove from inventory.	D3P48, 49
Sacramento	33.0	Right	103	326	Toe, Lower bank slope	Tree popouts, Rotational failures, wave wash	Rock Riprap	In	0	Repaired - Remove from inventory.	D3P47
Sacramento	33.3	Right	104	235	Full Bank	Scour around trees, toe, fluvial	Rock riprap	In	0	Currently being repaired - Remove from inventory.	D3P46
Sacramento	34.5	Right	105	808	Partially Repaired	Partially Repaired	Concrete rubble	In		Repaired - Remove from inventory.	D3P43-45
Sacramento	43.3	Right	112	1259	Levee slope	Fluvial	Concrete rubble, rock, and cobble	In	0	Repaired - Remove from inventory.	D3P33, 34
Sacramento	43.7	Right	113	1090	Partially Repaired D/S; Toe, Levee slope	Partially Repaired D/S; Fluvial at U/S 20m section	None D/S; Rock riprap at 20m U/S end	In		Repaired - Remove from inventory.	D3P32
Sacramento	44.7	Right	114	1585	Partially Repaired	Partially Repaired	None	In		Repaired - Remove from inventory.	D3P30, 31
Sacramento	47.0	Left	115	1156	Toe, berm	Fluvial, wave wash	None	In	5 - 10	Repaired - Remove from inventory.	D3P29
Sacramento	47.9	Right	116	1031	Toe	Toe scour, midslope scour/erosion around trees	Riprap	In		Repaired - Remove from inventory.	D3P28 d/s end, DeP27 u/s end
Sacramento	48.2	Right	1509	1039	Toe	Toe scour, midslope scour/erosion around trees	Riprap	In		Repaired - Remove from inventory.	D3P28 d/s end, DeP27 u/s end

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Sacramento	49.6	Left	117		Toe, Berm	Fluvial	None	Near	10	Repaired - Remove from inventory.	D3P25
Sacramento	49.9	Left	1511	700	Toe, berm, pockets	Fluvial, wave wash	Riprap at D/S end	In	15 - 50	Repaired - Remove from inventory.	D3P24 d./s
Sacramento	50.0	Left	118	772	Toe, berm, pockets	Fluvial, wave wash	Riprap at D/S end	In	15 - 50	Repaired - Remove from inventory.	D3P24 d./s
Sacramento	50.2	Left	1512	736	Toe, berm, pockets	Fluvial, wave wash	Riprap at D/S end	ln	15 - 50	Repaired - Remove from inventory.	D3P24 d./s
Sacramento	51.1	Left	120	731	Toe, Mid- slope	Fluvial	None	ln	0	Repaired - Remove from inventory.	D3P23
Sacramento	51.5	Left	121	1475	Berm, Levee toe	Fluvial		In or near	2	Repaired - Remove from inventory.	D3P22
Sacramento	53.2	Left	124	620	Whole Bank	Fluvial erosion of levee slope material	None (Rock riprapU/S and D/S)	ln	0 - 30	Repaired - Remove from inventory.	D3P20
Sacramento	53.3	Left	125	65	Levee slope (upper) and toe	Fluvial	Concrete rubble	In	0	Repaired - Remove from inventory.	D3P19
Sacramento	55.8	Right	130	776	Levee slope	Fluvial	None	In or near		Repaired - Remove from inventory.	D3P14 d/s, D3P15 @
Sacramento	56.7	Left	133	1765	Structural problem	Fluvial	Rock, concrete, and cobble	In		Repaired - Remove from inventory.	D3P8
Sacramento	56.8	Right	134	715	Toe, Levee slope	Fluvial, shelf retreat	None	In or near	0	Repaired - Remove from inventory.	D3P9, D3P10 d/s

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Sacramento	62.5	Right	137	255	Levee	Fluvial	Rehabilitated cobble with rock riprap	ln	0	Repaired - Remove from inventory.	D3P5 u/s
Sacramento	68.9	Left	140	786	Whole Bank	Tree popouts, Rotational failures, scour	None	In/near	10 - 20	Repaired - Remove from inventory.	D3P2 u/s
Sacramento	69.9	Right	141	1445	Toe, Levee slope	Fluvial	None	In (at U/S end)		Repaired - Remove from inventory.	D2P75
Sacramento	70.7	Right	83	606	Berm slope	Fluvial	Cobble and rubble	Near	10	Repaired - Remove from inventory.	D2P74
Sacramento	71.7	Right	85	492	Berm	Fluvial	Cobble	Very close	25	Repaired - Remove from inventory.	D2P70-72
Sacramento	72.2	Right	142	1381	Levee toe, Berm slope	Fluvial	None	In (at toe)	15	Repaired - Remove from inventory.	D2P68 @ u/s end, D2P69 u/s
Sacramento	73.0	Right	143	1065	Levee slope	Scallops	None	Near	0 - 15	Repaired - Remove from inventory.	D2P66, 67
Sacramento	78.0	Left	150	1058	Berm or Levee slope	Fluvial	None	In or near	10	Repaired - Remove from inventory.	D2P55 d/s
Sacramento	85.6	Right	154	1148	Toe	Toe scour	Cobble	ln	0	Repaired - Remove from inventory.	D2P51
Sacramento	99.3	Right	163	438	Whole Bank	Rotational Failure	Rock Riprap	In	15	Repaired - Remove from inventory.	D2P36 d/s, D2P37
Sacramento	99.5	Right	164	622	Levee toe, slope	Toe scour and piping	Riprap - handplaced	In	0	Repaired - Remove from inventory.	D2P4 u/s end, D2P33 d/s end

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Sacramento	123.5	Left	175	248	Toe	Mass failure, scour	None	In	0	Repaired - Remove from inventory.	D2P20 d/s
Sacramento	130.8	Right	180	85	Toe, Levee slope	Toe scour	Cobble	In	0	Repaired - Remove from inventory.	D2P16 d/s
Sacramento	135.3	Right	185	965	Toe	Recession	None	Levee is setback	50+	Remove from inventory - Berm is too big. No observed changes.	D2P10, D2P11 d/s
Sacramento	141.4	Right	190	2389	Toe, levee slope	Toe scour, scallops, mass failure	Riprap and cobble	In or near	0	Repaired - Remove from inventory. (Downstream transition is not good, didn't carry revetment far enough downstream, downstream 200 feet still has very steep upper bank)	D2P2 u/s, D2P3 d/s, D2P4 @ d/s end
Sacramento	145.9	Left	191	125	Whole Bank	Fluvial, mass failure	None	In	5	DWR repaired with setback levee - Remove from inventory.	D1P24, 25
Sacramento	154.5	Right	193	938	Partially Repaired	Partially Repaired	Cobbles, emergency riprap	Near	25	Repaired - Remove from inventory.	D1P20 d/s, D1P21
Sacramento	164.0	Right	196	783	Toe	Toe scour	None	ln	0	Repaired - Remove from inventory.	D1P16, 17
Sacramento	182.0	Right	313	1474	Toe, Lower bank slope	Fluvial, Mass failure	Cobbles	Near	30	Repaired - Remove from inventory.	D1P2 d/s, D1P3, D1P4 d/s, D1P5, 6 @ d/s site
Steamboat	16.2	Right	315	191	Whole Bank	Dry ravel, Wave wash	Riprap	In	0	Repaired - Remove from inventory	D3P84
Steamboat	19.0	Right	318	552	Toe	Fluvial/mass failure, tree popouts	None	In and near	0 - 10	Currently being repaired - Remove from inventory	D4P3 view u/s
Steamboat	19.4	Right	319	272	Toe, middle slope	Scour of existing scallops, mass failure	Intermittent rock riprap/ concrete rubble		0	Repaired - Remove from inventory	D4P4 view u/s

Table 3. Sacramento River Levee System - Removed Erosion Sites - 2007

2007 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Steamboat	22.7	Right	320	222	Levee slope	Fluvial	None	In		Repaired - Remove from inventory	D3P59
Steamboat	24.8	Left	324	266	Toe scour/ tree popouts	Scour, wave wash	None	In or near	0 - 10	Repaired - Remove from inventory	D3P54
Sutter	24.8	Left	328	931	Levee slope	Mass Failure, Scallops	None	In		Repaired - Remove from inventory	D3P61 u/s
Sutter	25.4	Right	329	834	Toe, Berm slope	Slumping	None	In	0 - 15	Repaired - Remove from inventory	D3P63 u/s, D3P64

CRITICAL SITES IN DATABASE IN 2007

River	River Mile	Bank	GIS Polygon ID	Est. Length (ft)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (ft)	2007 Recon Comments	2007 Photo #
Cache Creek	LM 2.4	Left	10	754	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	15 - 30	***REMAINS CRITICAL*** DWR repaired with setback levee, BUT levee doesn't extend far enough downstream.	D7P8, 9, 10, 11
Cache Creek	LM 3.9	Left	14	430	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	10 - 25	***REMAINS CRITICAL*** Some new minor upper bank slumps. No other observed changes. (DWR plans setback levee at this location)	D7P15, 16
Cache Creek	LM 4.2	Left	15	325	Bank Slope	Toe Erosion, Upper Bank Collapse/ Mass Failures	None	Near	3 - 25	***REMAINS CRITICAL*** No observed changes. (DWR plans setback levee at this location)	D7P17
Cache Slough	21.8	Right	19	839	Whole Bank and toe	Rotational failure, fluvial toe erosion	None	In	0	***REMAINS CRITICAL*** Still critical but identified as DWR Emergency Repair Site. Has not been repaired yet. (NOTE: Site just upstream has been repaired but was not part of inventory)	D4P5 @ u/s end, D4P6 of u/s repaired site
Steamboat	16.6	Right	316	396	Levee slope	Fluvial, wavewash	Riprap	In	0	***REMAINS CRITICAL*** Remains unrepaired - No other observed changes.	D3P85

2007 Waypoint Locations

	River		Site		Unstream	Waypoint			Middle V	Vaypoint			Downstro	eam Waypoint	
RIVER	Mile	BANK		GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude
Bear	0.8	Left	,	304	RM0.8L U	-121.5636863	38.94704335					303	RM0.8L D	-121.5640936	38.94647696
Cache Creek	2.4	Left		312	LM2.4L U	-121.799562	38.73347328					311	LM2.4L D	-121.7971532	38.73262162
Cache Creek	2.8	Left		313	LM2.8L U	-121.7936858	38.73400308					314	LM2.8L D	-121.7929643	38.7341064
Cache Creek	3.4	Left		315	LM3.4L U	-121,785095	38.73294959					316	LM3.4L D	-121.7852665	38.73205084
Cache Creek	3.9	Left		318	LM3.9L U	-121.7816207	38.72824193					317	LM3.9L D	-121.7803359	38.72762489
Cache Creek	4.2	Left		319	LM4.2L U	-121.7757813	38.72720152					320	LM4.2L D	-121.7746996	38.7269197
Cache Slough	15.9	Left		246	RM15.9L U	-121.6557118	38.20002017					245	RM15.9L D	-121.655836	38.19953089
Cache Slough	21.8	Right		241	RM21.8R U	-121.7049809	38.26997888					240	RM21.8R D	-121.7032105	38.26814584
Cache Slough	22.8	Right		403	RM22.8R U	-121.5826939	38.28211181					404	RM22.8R_D	-121.7166954	38.28160834
Cache Slough	23.6	Right		242	RM23.6R U	-121.7246198	38.28829908					243	RM23.6R_D	-121.7230457	38.28647765
Cherokee Canal	14	Left			_			359	CC2-LM 14.0M	-121.7725211	39.42206834				
Cherokee Canal	21.9	Left		360	CC2-LM 21.9N	-121.8616863	39.36527935					361	CC2-LM_21.9S	-121.8672739	39.36249844
Deep Water Ship Channel	5	Left						345	DWSC1-LM5.00M	-121.5977277	38.43745764				
Deep Water Ship Channel	5.01	Left						346	DWSC1-LM5.01M	-121.5977808	38.43735064				
Deer Creek	0.9	Right		366	DCTC2-LM0.9U	-122.0239078	39.96826174					367	DCTC2-LM0.9D	-122.024696	39.96786512
Deer Creek	2.4	Left		000	20.02 20.00	122.0200010	00.00020111	368	DCTC2-LM2.4M	-122.0316258	39.96290652	00.	20102 20.02	122.02.1000	00.00700012
Elder Creek	1.4	Left		370	ECTC1-LM1.4U	-122.1641788	40.05159551					369	ECTC1-LM1.4D	-122.1631063	40.05197862
Elder Creek	4.1	Left		373	ECTC1-LM4.1U	-122.1278943	40.05533909					374	ECTC1-LM4.1D	-122.1031003	40.05470403
Elder Creek	3	Right		371	ECTC2-LM3.0U	-122.140662	40.05479309					372	ECTC2-LM3.0D	-122.1403203	40.05504613
Elk Slough	0.2	Both			7.11.1.00			340	RM0.2B M	-121.5832575	38.33565509				
Feather River	0.6	Left		281	RM0.6L U	-121.6285135	38.79374236	0-10	11110.20_11	.21.0002070	20.0000000	282	RM0.6L D	-121.6281561	38.79339417
Feather River	1	Left		284	RM1.0L U	-121.6330503	38.8009203					283	RM1.0L D	-121.6319391	38.79816483
Feather River	17.8	Left		296	RM17.8L U	-121.5793037	39.00898838					295	RM17.8L D	-121.5790208	39.00789337
Feather River	19.7	Left		298	RM19.7L U	-121.5937475	39.0227835					297	RM19.7L D	-121.5936586	39.02194323
Feather River	3.6	Left		286	RM3.6L U	-121.6357069	38.83324818					285	RM3.6L D	-121.6364858	38.8314981
Feather River	3.8	Left		288	RM3.8L U	-121.6344544	38.83636648					287	RM3.8L D	-121.6350303	38.83470746
Feather River	5	Left		290	RM5.0L U	-121.6300771	38.85040692					289	RM5.0L D	-121.6310178	38.84802271
Feather River	5.5	Left		292	RM5.5L U	-121.6252563	38.85949451					291	RM5.5L D	-121.6258579	38.85872722
Feather River	7	Left		294	RM7.0L U	-121.6122277	38.87977861					293	RM7.0L D	-121.6127284	38.8787131
Feather River	28.5	Right		365	FR-RM28.5RU	-121.6068847	39.13842825					364	FR-RM28.5RD	-121.6045119	39.13563023
Georgianna	0.3	Left		249	RM0.3L U	-121.5865186	38.12998898					248	RM0.3L D	-121.5822772	38.13029716
Georgianna	1.7	Left		251	RM1.7L U	-121.5997584	38.14347309					250	RM1.7L D	-121.597228	38.14030243
Georgianna	2.5	Left		253	RM2.5L U	-121.5936152	38.1508478					252	RM2.5L D	-121.5947452	38.15122364
Georgianna	3.6	Left		255	RM3.6L U	-121.5918342	38.15608473					254	RM3.6L D	-121.5912573	38.1529193
Georgianna	3.7	Left						258	RM3.7L mid	-121.5908621	38.15724752				
Georgianna	3.7	Left		257	RM3.7L U	-121.5912665	38.15700802					256	RM3.7L D	-121.591693	38.15642221
Georgianna	4	Left		260	RM4.0L U	-121.5874466	38.15711108					259	RM4.0L D	-121.5891133	38.15720409
Georgianna	4.3	Left		262	RM4.3L_U	-121.5852759	38.15999408					261	RM4.3L_D	-121.5866567	38.15763061
Georgianna	4.5	Left						329	RM4.5L_mid	-121.5847888	38.16125739				
Georgianna	4.6	Left		264	RM4.6L_U	-121.5832149	38.1644799		_			263	RM4.6L_D	-121.5846317	38.16156158
Georgianna	5.3	Left		266	RM5.3L_U	-121.5800856	38.17631404					265	RM5.3L_D	-121.5817319	38.16798093
Georgianna	6.1	Left		268	RM6.1L_U	-121.5702577	38.18210665					267	RM6.1L_D	-121.576143	38.18148697
Georgianna	6.4	Left		270	RM6.4L_U	-121.5678779	38.18338194					269	RM6.4L_D	-121.5689704	38.18267999
Georgianna	6.6	Left		272	RM6.6L_U	-121.5633532	38.18553905					271	RM6.6L_D	-121.5644685	38.18516573
Georgianna	6.8	Left		274	RM6.8L_U	-121.5588451	38.18797486					273	RM6.8L_D	-121.5617363	38.18602345
Georgianna	7	Right		276	RM7.0R_U	-121.5577291	38.1897749					275	RM7.0R_D	-121.5591208	38.18828961
Georgianna	8.3	Left		278	RM8.3L_U	-121.5425918	38.20080436					277	RM8.3L_D	-121.5428431	38.20070208
Georgianna	9.3	Left		280	RM9.3L_U	-121.5376961	38.21393973					279	RM9.3L_D	-121.5356015	38.21168025
Knights Landing Ridge Cut	0.2	Right		348	KLRC1-LM0.2U	-121.6663495	38.72226173					347	KLRC1-LM0.2D	-121.663858	38.71893823
Knights Landing Ridge Cut	3	Left		382	KLRC2-LM3.0N	-121.6929625	38.75794168					383	KLRC2-LM3.0S	-121.6925654	38.75490174
Knights Landing Ridge Cut	3.1	Left		380	KLRC2-LM3.1N	-121.6939625	38.75946836					381	KLRC2-LM3.1S	-121.6932847	38.75862329
Knights Landing Ridge Cut	4.2	Left		378	KLRC2-LM4.2N	-121.7017275	38.77193236					379	KLRC2-LM4.2S	-121.701391	38.77090116
Knights Landing Ridge Cut	5.3	Left		376	KLRC2-LM5.3N	-121.7240017	38.79256232					377	KLRC2-LM5.3S	-121.703773	38.77582381
Lower American	0.3	Left		322	RM0.3L_U	-121.500731	38.60130613					321	RM0.3L_D	-121.5018673	38.60103326
Lower American	10	Left						341	RM10.0L_M	-121.3717021	38.56735008				
Lower American	10.6	Left		327	RM10.6L_U	-121.3604842	38.56996537					326	RM10.6L_D	-121.3609127	38.56980527
Lower American	2.8	Left		328	RM2.8L_U	-121.4677601	38.58900831					323	RM2.8L_D	-121.468679	38.58927366
Natomas Cross Canal	3	Right						375	NCC5_LM3.0M	-121.5747879	38.8040447				
Sacramento	8	Left		207	RM8.0L_U	-121.7068551	38.09062056					208	RM8.0L_D	-121.7072987	38.08857282

	River		Site	ı	Unetroan	n Waypoint		ı	Middle V	Vaypoint			Downstr	eam Waypoint	1
RIVER	Mile	BANK		GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude
Sacramento	10.8	Left	3(,	205	RM10.8L U	-121.6873476	38.13138724	0.0.12,111		Latitudo	Longitudo	206	RM10.8L D	-121.6883428	38.12861284
Sacramento	21.5	Left		199	RM21.5L U	-121.5576864	38.20064643			İ		200	RM21.5L D	-121.5578294	38.20022522
Sacramento	22.5	Left		197	RM22.5L_U	-121.5572598	38.21344865					198	RM22.5L_D	-121.557143	38.21111231
Sacramento	22.7	Left		195	RM22.7L_U	-121.5567598	38.21895128					196	RM22.7L_D	-121.5568898	38.21810427
Sacramento	23.2	Left		193	RM23.2L_U	-121.555783	38.22485076					194	RM23.2L_D	-121.5558286	38.22323343
Sacramento	23.3	Left		191	RM23.3L_U	-121.5556673	38.22728743					192	RM23.3L_D	-121.5556963	38.22658494
Sacramento	24.8	Left		189	RM24.8L_U	-121.5440651	38.24046433					190	RM24.8L_D	-121.5467531	38.24078479
Sacramento	25.2	Left		187	RM25.2L_U	-121.5377492	38.23907539					188	RM25.2L_D	-121.5387615	38.23931503
Sacramento	26	Left		185	RM26.0L_U	-121.5240018	38.23887236					186	RM26.0L_D	-121.529258	38.23794981
Sacramento	31.6	Right		180	RM31.6R_U	-121.5662439	38.29574582					179	RM31.6R_D	-121.5653254	38.29477276
Sacramento	35.3	Right		169	RM35.3R_U	-121.5614364	38.34207793					170	RM35.3R_D	-121.5616857	38.34161658
Sacramento	35.4	Left		167	RM35.4L_U	-121.5575004	38.34325058	171	DMOE 4D	404 5500004	38.34353607	168	RM35.4L_D	-121.5590429	38.34261777
Sacramento Sacramento	35.4 38.5	Right Right		165	RM38.5R U	-121.5231744	38.37191005	171	RM35.4R_mid	-121.5596364	38.34353607	166	RM38.5R D	-121.5229683	38.37093359
Sacramento	41.9	Right		163	RM41.9R U	-121.5231744	38.4177307			-		164	RM41.9R D	-121.5229663	38.41442609
Sacramento	42.7	Right		399	RM42.7R U	-121.5458162	38.42482812					162	RM42.7R D	-121.5227069	38.42460218
Sacramento	49.7	Left		149	RM49.7L U	-121.5462399	38.48118968					398	RM49.7L D	-121.5437807	38.48060402
Sacramento	52.3	Left		142	RM52.3L U	-121.5475933	38.51521044					407	RM52.3L D	-121.5151617	38.51410793
Sacramento	53.5	Right		137	RM53.5R U	-121.5248626	38.52094919			•		138	RM53.5R D	-121.5252252	38.51988227
Sacramento	55.2	Left		135	RM55.2L U	-121.5209321	38.53399147			1		136	RM55.2L D	-121.5230344	38.53321588
Sacramento	55.5	Left		133	RM55.5L U	-121.5163572	38.53667392			1		134	RM55.5L D	-121.5170867	38.53603592
Sacramento	56.5	Right		129	RM56.5R_U	-121.5143107	38.55132866					130	RM56.5R_D	-121.5139915	38.55033853
Sacramento	56.6	Left						128	RM56.6L_mid	-121.512599	38.55184002				
Sacramento	56.7	Right		394	RM56.7R_U	-121.5146506	38.55428498					394	RM56.7R_D	-121.5171497	38.55251196
Sacramento	57	Right		124	RM57.0R_U	-121.5167157	38.55820761					125	RM57.0R_D	-121.5165656	38.55775111
Sacramento	57.2	Right		392	RM57.2R_U	-121.5179897	38.56008861					393	RM57.2R_D	-121.5179897	38.55901917
Sacramento	62.9	Left		121	RM62.9R_U	-121.5531538	38.60131879					120	RM62.9R_D	-121.552815	38.60090748
Sacramento	63	Right						119	RM63.0R_mid	-121.5535598	38.60191441				
Sacramento	71.3	Right		111	RM71.3R_U	-121.6340694	38.68412243					112	RM71.3R_D	-121.6337969	38.68270636
Sacramento	73.5	Left		105	RM73.5L_U	-121.6123476	38.71045249					104	RM73.5L_D	-121.6150147	38.70840562
Sacramento	74.4	Right		102	RM74.4R_U	-121.6063735	38.72128723					103	RM74.4R_D	-121.6073822	38.71770561
Sacramento	75.3	Right		100	RM75.3R_U	-121.6040367	38.73609847					101	RM75.3R_D	-121.6058442	38.72868412
Sacramento	77.2	Left		98	RM77.2L_U	-121.5919669	38.76106172					99	RM77.2L_D	-121.5921838	38.75920993
Sacramento	77.7	Right		97	RM77.7R_U	-121.5949671	38.76526677					96	RM77.7R_D	-121.594844	38.76484811
Sacramento	78.3	Left		92	RM78.3L_U	-121.5988652	38.77450704					93	RM78.3L_D RM78.8L D	-121.5977878	38.77292147
Sacramento	78.8	Left		90 89	RM78.8L_U	-121.6025677	38.77858737 38.75904525					91 88		-121.6014706	38.77763166
Sacramento Sacramento	83.9 86.3	Right Left		89	RM83.9R_U RM86.3L U	-121.6691015 -121.6859515	38.75904525			-		88	RM83.9R_D RM86.3L D	-121.6675001 -121.6905526	38.75939003 38.7703904
Sacramento	86.5	Right		85	RM86.5R U	-121.6866208	38.77733052					84	RM86.5R D	-121.6864759	38.77705072
Sacramento	86.9	Right		83	RM86.9R U	-121.6882382	38.78040664					82	RM86.9R D	-121.6872811	38.77901509
Sacramento	87	Left		78	RM87.0L U	-121.6900926	38.78490287			•		79	RM87.0L D	-121.6875331	38.78119735
Sacramento	92.8	Left		76	RM92.8L U	-121.726865	38.84041594					77	RM92.8L D	-121.7301746	38.83882647
Sacramento	93.7	Left		74	RM93.7L U	-121.7236192	38.85236197					75	RM93.7L D	-121.7239212	38.85027347
Sacramento	95.8	Left		339	RM95.8L_U	-121.752059	38.87058109					73	RM95.8L_D	-121.7493302	38.87185287
Sacramento	96.2	Left		72	RM96.2L_U	-121.7563738	38.86918249					338	RM96.2L_D	-121.7522365	38.87047377
Sacramento	99	Left		70	RM99.0L_U	-121.7840832	38.86188819					71	RM99.0L_D	-121.7839183	38.85744112
Sacramento	101.3	Right		64	RM101.3R_U	-121.8135918	38.87510869					65	RM101.3R_D	-121.8130179	38.87485428
Sacramento	103.4	Left						63	RM103.4L_mid	-121.8033612	38.90109945				
Sacramento	104	Left		61	RM104.0L_U	-121.7907339	38.90274485					62	RM104.0L_D	-121.801168	38.90135315
Sacramento	104.5	Left		59	RM104.5L_U	-121.7927543	38.90661927					60	RM104.5L_D	-121.7903736	38.90404115
Sacramento	114.5	Right	ļ	57	RM114.5R_U	-121.8111925	38.98918088			ļ		58	RM114.5R_D	-121.8118414	38.98908078
Sacramento	116	Left	ļ	55	RM116.0L_U	-121.8029243	39.00138724			ļ		56	RM116.0L_D	-121.8008981	38.99974481
Sacramento	116.5	Left		53	RM116.5L_U	-121.8124577	39.00622064			.		54	RM116.5L_D	-121.8050307	39.00329329
Sacramento	122	Right		52	RM122.0R_U	-121.8393351	39.06399744			1		51	RM122.0R_D	-121.8389218	39.0633512
Sacramento	122.3	Right	.	50	RM122.3R_U	-121.8436022	39.06628657	-		1		49 47	RM122.3R_D	-121.8429229	39.06590313
Sacramento Sacramento	123.3 123.7	Left Right	 	48	RM123.3L_U	-121.8579947	39.06916591	44	RM123.7R mid	-121.8671174	39.06695228	4/	RM123.3L_D	-121.8576455	39.06928583
Sacramento	123.7	Right		42	RM127.9R U	-121.9041594	39.10071079	44	KIVI123./K_MIQ	-121.80/11/4	39.00095228	43	RM127.9R D	-121.9039122	39.10009139
Sacramento	130	Left	1	42	RM127.9R_U RM130.0L U	-121.9041594	39.12217719			1		43	RM127.9R_D RM130.0L D	-121.9039122	39.10009139
Sacramento	131.8	Left	 	34	RM131.8L U	-121.9365211	39.13203956			1		35	RM131.8L_D	-121.936246	39.12133161
Sacramento	132.9	Right		36	RM131.8L_U	-121.9355628	39.14423946			!		37	RM132.9R D	-121.9375703	39.1445137
Sacramento	133	Left		32	RM133.0L U	-121.9326539	39.14242736			!		33	RM133.0L D	-121.9359862	39.14379616
Sacramento	133.8	Left		31	RM133.8L U	-121.918359	39.14268105	1		1		30	RM133.8L_D	-121.9186651	39.14218989
Sacramento	136.6	Left		26	RM136.6L U	-121.9387832	39.17389502			1		27	RM136.6L D	-121.937925	39.17234438
540.4	.00.0		L			.21.000.302	20000002					_	D	.200.020	50201.00

Table 5. Sacramento River Levee System - Waypoint Locations - 2007

RIVER	River	BANK	Site		Upstream	Waypoint			Middle V	Vaypoint		Downstream Waypoint				
RIVER	Mile	DAINK	Length (ft)	GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude	GIS ID/WPT	Point ID	Latitude	Longitude	
Sacramento	136.7	Right		24	RM136.7R_U	-121.9414138	39.17563977					25	RM136.7R_D	-121.9408651	39.1751179	
Sacramento	136.9	Right		22	RM136.9R_U	-121.9451752	39.17892783					23	RM136.9R_D	-121.9444592	39.17836129	
Sacramento	138.1	Left		20	RM138.1L_U	-121.9357829	39.19321902					21	RM138.1L_D	-121.9341991	39.19003825	
Sacramento	152.8	Left		15	RM152.8L_U	-122.0152647	39.2851629					16	RM152.8L_D	-122.0156897	39.28456839	
Sacramento	157.7	Right		11	RM157.7R_U	-122.0298358	39.3327464					12	RM157.7R_D	-122.029443	39.33144237	
Sacramento	163	Left		9	RM163.0L_U	-122.0035057	39.39956112					10	RM163.0L_D	-122.0025503	39.39636645	
Sacramento	168.3	Left		5	RM168.3L_U	-121.9943678	39.45515774					6	RM168.3L_D	-121.9943332	39.45364276	
Sacramento	172	Left		405	RM172.0L_U	-121.7162795	39.50440485					406	RM172.0L_D	-121.9853647	38.97029386	
Sacramento	177.8	Right		3	RM177.8R_U	-122.0034718	39.5566168					4	RM177.8R_D	-122.0026145	39.55393855	
Steamboat Slough	16.6	Right		212	RM16.6R_U	-121.6325923	38.19450425					211	RM16.6R_D	-121.6338974	38.1941583	
Steamboat Slough	18.8	Right		214	RM18.8R_U	-121.6097065	38.21256802					213	RM18.8R_D	-121.6098335	38.21158142	
Steamboat Slough	23.2	Left		221	RM23.2L_U	-121.5889635	38.26928206					344	RM23.2L_D	-121.5886551	38.26885948	
Steamboat Slough	23.9	Right		223	RM23.9R_U	-121.5895282	38.27898474					222	RM23.9R_D	-121.5897672	38.27856488	
Steamboat Slough	24.7	Right		225	RM24.7R_U	-121.5837451	38.28871129					224	RM24.7R_D	-121.5849262	38.28646396	
Steamboat Slough	25	Left		402	RM25.0L_U	-121.5800123	38.29338666					228	RM25.0L_D	-121.5829176	38.29268299	
Steamboat Slough	25.8	Right		400	RM25.8R_U	-121.5300075	38.30231741					401	RM25.8R_D	-121.5796266	38.30173216	
Steamboat Slough	26	Left		230	RM26.0L_U	-121.5773872	38.30308339					231	RM26.0L_D	-121.5783245	38.30262302	
Sutter Bypass East Levee	0.4	Left		390	SBPE3-LM0.4N	-121.8266104	39.14613281					391	SBPE3-LM0.4S	-121.8263189	39.14597872	
Sutter Slough	24.7	Right		236	RM24.7R_U	-121.6055872	38.29551517					237	RM24.7R_D	-121.6043513	38.29088633	
Sutter Slough	26.5	Left		233	RM26.5L_U	-121.591517	38.31540781					232	RM26.5L_D	-121.5922217	38.31398788	
Willow Slough Bypass	0.6	Left		356	WSBP1-LM0.6W	-121.6649098	38.59078358					355	WSBP1-LM0.6E	-121.6596714	38.59088998	
Willow Slough Bypass	6.9	Right		388	WSBP2-LM6.9N	-121.6474222	38.5788666					389	WSBP2-LM6.9S	-121.6472333	38.57702777	
Willow Slough Bypass	2.2	Left		358	WSBP3-LM2.2W	-121.6751158	38.59051601					357	WSBP3-LM2.2E	-121.6677745	38.59069369	
Yolo Bypass	0.1	Right		350	YBP2-LM0.1N	-121.6717325	38.67322902					349	YBP2-LM0.1S	-121.6715162	38.67206949	
Yolo Bypass	2	Right		352	YBP2-LM2.0N	-121.6666526	38.64888138					351	YBP2-LM2.0S	-121.6663851	38.64817839	
Yolo Bypass	3.8	Right		354	YBP2-LM3.8N	-121.6482769	38.62218936					353	YBP2-LM3.8S	-121.6453712	38.61826713	
Yolo Bypass	2.5	Right		386	YBPW1-LM2.5N	-121.6601356	38.72689285					387	YBPW1-LM2.5S	-121.6601431	38.72639081	
Yolo Bypass	2.6	Right		385	YBPW1-LM2.6N	-121.6620142	38.72549176					384	YBPW1-LM2.6S	-121.6645374	38.72437144	
Yuba River	2.3	Left		362	YR8-LM2.3U	-121.5142574	39.15321457					363	YR8-LM2.3D	-121.5174047	39.15038644	